

APPENDIX 6

AQUATIC CONSERVATION STRATEGY OBJECTIVES REVIEW SUMMARY

Environmental Assessment Number OR-086-00-01

Table 1. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Four Components of the Aquatic Conservation Strategy

Component 1 - Riparian Reserves: The Record of Decision (C-30) and the Salem District Resource Management Plan (p. 10) specify Riparian Reserve widths. The Riparian Reserve boundaries will be established consistent with this direction. Additionally, stream bank stability and water temperature would be protected by maintaining a "no cut" buffer along all streams and the wetlands in unit 1. The no cut buffer would be 100 feet for fish-bearing streams and 50 feet for non-fish bearing streams and the wetlands less than one acre in unit 1. Additionally, riparian habitat would be protected by directionally felling trees away from or parallel to streams and there would be no road construction within the Riparian Reserve.

Component 2 - Key Watershed: The projects are located within the Willamina Creek watershed which is **not** a designated key watershed (see page 1 of the environmental assessment).

Component 3 - Watershed Analysis: The first iteration of the *Deer Creek, Panther Creek, Willamina Creek, and South Yamhill Watershed Analysis* was completed in May 1998. The watershed analysis contained recommendations, pages 74-83, to perform road decommissioning and density management to benefit the development of late-seral stage habitat.

Component 4 - Watershed Restoration: Thinning the outer portions of the Riparian Reserves would maintain and restore 1/ the distribution, diversity and complexity of the forest types within the watershed while ensuring protection of the aquatic systems; 2/ the species composition and structural diversity of plant communities within the Reserves; and 3/ a future supply of larger-sized trees, which could become longer lasting coarse woody debris. Road decommissioning would restore the complexity of watershed and landscape-scale features by decompacting the soil and speeding up re-vegetation, and also helping restore connectivity within and between watersheds.

Table 2. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

ACS Objective 1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.

Alternative 1: The current distribution, diversity and complexity of watershed and landscape-scale features would be maintained. **Does not retard or prevent the attainment of ACS Objective 1.**

Alternative 2 (Density Management): The proposed action would help restore diversity and complexity within the watershed. The objectives of the density management are to accelerate the development of some late-successional forest structural features, including large trees, gaps in the canopy, snags and down logs, various levels of overstory tree densities, and various levels of understory development. Density management of some of the outer portions of the RR and leaving the portions in the "no-treatment" buffers untreated will increase the level of structural complexity within the RR. Using density management to accelerate tree growth, structural development, and additions of coarse woody debris are recommendations contained in the watershed analysis (BLM 1998). Implementation of this prescription, both inside and outside the RR, will enhance the overall level of diversity in this area. **Restores and does not retard or prevent the attainment of ACS Objective 1.**

Alternative 2 (Road Decommissioning): Road decommissioning would help restore the complexity of watershed and landscape-scale features by decompacting the soil and speeding up revegetation of the roads. **Restores and does not retard or prevent the attainment of ACS Objective 1.**

Alternative 3 (Density Management): More acres would be treated, but the overall effect would be the same as Alternative 2. **Restores and does not retard or prevent the attainment of ACS Objective 1.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

Table 2. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

ACS Objective 2. Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. The network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian dependent species.

Alternative 1: The current condition of connectivity would be maintained. **Does not retard or prevent the attainment of ACS Objective 2.**

Alternative 2 (Density Management): The objectives of the density management are to accelerate the development of some late-successional forest structural features, including large trees, gaps in the canopy, snags and down logs, various levels of overstory tree densities, and various levels of understory development. Using density management to accelerate tree growth, structural development, and additions of coarse woody debris are recommendations contained in the watershed analysis (BLM 1998). Thinning to increase diversity and structural development would help increase connectivity within the watershed, while connectivity between watersheds would be maintained. **Does not retard or prevent the attainment of ACS Objective 2.**

Alternative 2 (Road Decommissioning): Decompacting roads would help maintain and restore drainage network connections and speed up revegetation, also helping restore connectivity within and between watersheds. **Restores and does not retard or prevent the attainment of ACS Objective 2.**

Alternative 3 (Density Management): More acres would be treated, but the overall effect would be the same as Alternative 2. **Does not retard or prevent the attainment of ACS Objective 2.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

ACS Objective 3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

Alternative 1: The current condition of the physical integrity of the aquatic system would be maintained. **Does not retard or prevent the attainment of ACS Objective 3.**

Alternative 2 (Density Management): No impacts to the physical integrity of the aquatic system would occur due to very little thinning within RR and no-cut buffers on all streams (50 foot on non-fish bearing and 100 foot on fish bearing), as recommended in the Deer Creek, Panther Creek, Willamina Creek and South Yamhill watershed analysis (BLM 1998). **Does not retard or prevent the attainment of ACS Objective 3.**

Alternative 2 (Road Decommissioning): Road decommissioning would not have any impact on physical integrity of the aquatic system because none of the roads cross streams or are near stream channels. **Does not retard or prevent the attainment of ACS Objective 3.**

Alternative 3 (Density Management): No impacts to the physical integrity of the aquatic system would occur due to little thinning within RR and no-cut buffers on all streams (50 foot on non-fish bearing and 100 foot on fish bearing). **Does not retard or prevent the attainment of ACS Objective 3.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

Table 2. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

ACS Objective 4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.

Alternative 1: The current condition of water quality would be maintained. **Does not retard or prevent the attainment of ACS Objective 4.**

Alternative 2 (Density Management): The possibility of an increase in turbidity is minimized or eliminated due to the following: no new road construction, minimal maintenance of existing roads (addition of rock and brushing), and hauling and yarding of timber restricted to periods of low soil moisture (generally July 1-October 31). No-cut buffers would be placed on stream channels (50 feet on non-fish bearing and 100 feet on fish bearing stream) and little thinning would occur in RR, therefore the potential for sediment to enter streams and increase turbidity levels above natural conditions is negligible, and canopy cover would be maintained over stream channels and generally throughout the RR, which would maintain water temperatures. **Does not retard or prevent the attainment of ACS Objective 4.**

Alternative 2 (Road Decommissioning): The roads within Section 8 to be decommissioned are located mainly on ridgetops and do not cross any streams. Though there is a possibility of sediment entering streams through road decommissioning activities, the potential is negligible due to distance from streams and no culvert removal. No other part of this project would have any impact on water quality. **Does not retard or prevent the attainment of ACS Objective 4.**

Alternative 3 (Density Management): The possibility of an increase in turbidity is minimized due to the following: no new road construction, minimal maintenance of existing roads (addition of rock and brushing), no-cut buffers placed on stream channels (50 feet on non-fish bearing and 100 feet on fish bearing stream) and little thinning in RR. Hauling and some of the cable yarding could occur during wet periods, which has the potential to mobilize sediment and increase turbidity in the short-term, however no long-term impacts or turbidity levels above natural levels are anticipated. Canopy cover would be maintained over stream channels and generally throughout the RR, which would maintain water temperatures. **Does not retard or prevent the attainment of ACS Objective 4.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

Table 2. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

ACS Objective 5. Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

Alternative 1: The current condition of the sediment regime would be maintained. **Does not retard or prevent the attainment of ACS Objective 5.**

Alternative 2 (Density Management): The possibility of an impact to the sediment regime or an increase in sediment moving into streams is minimized or eliminated due to the following: no new road construction, minimal maintenance of existing roads (addition of rock and brushing), and hauling and yarding of timber restricted to periods of low soil moisture (generally July 1-October 31). In addition, no-cut buffers would be placed on stream channels (50 feet on non-fish bearing and 100 feet on fish bearing stream) and little thinning would occur in RR, therefore the potential for sediment to enter streams is negligible. **Does not retard or prevent the attainment of ACS Objective 5.**

Alternative 2 (Road Decommissioning): The roads within Section 8 to be decommissioned are located mainly on ridgetops and do not cross any streams, which would minimize impacts to the sediment regime or an increase in sediment moving into streams. Decommissioning roads would help return the sediment regime to a more natural state though decompacting the soil which would allow more water infiltration and help revegetation. **Does not retard or prevent the attainment of ACS Objective 5.**

Alternative 3 (Density Management): The possibility of an impact to the sediment regime or an increase in sediment moving into streams is minimized due to the following: no new road construction, minimal maintenance of existing roads (addition of rock and brushing), no-cut buffers placed on stream channels (50 feet on non-fish bearing and 100 feet on fish bearing stream) and little thinning in RR. Hauling and some of the cable yarding could occur during wet periods, which has the potential to mobilize sediment in the short-term, however no long-term impacts are anticipated. **Does not retard or prevent the attainment of ACS Objective 5.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

Table 2. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

ACS Objective 6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

Alternative 1: The current condition of in-stream flows would be maintained. **Does not retard or prevent the attainment of ACS Objective 6.**

Alternative 2 (Density Management): Due to no road building and no-cut buffers on all streams as recommended in the Deer Creek, Panther Creek, Willamina Creek and South Yamhill watershed analysis (BLM 1998), no impacts would occur to in-stream flows as a result of this action. **Does not retard or prevent the attainment of ACS Objective 6.**

Alternative 2 (Road Decommissioning): Road obliterations remove drainage systems that are not part of the natural pattern for streamflows. The roads within Section 8 to be decommissioned are located mainly on ridgetops and do not cross any streams, therefore little changes in instream flows are expected as a result of this action. **Does not retard or prevent the attainment of ACS Objective 6.**

Alternative 3 (Density Management): Same as Alternative 2. **Does not retard or prevent the attainment of ACS Objective 6.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

ACS Objective 7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

Alternative 1: The current condition of floodplain inundation and water tables would be maintained. **Does not retard or prevent the attainment of ACS Objective 7.**

Alternative 2 (Density Management): The current condition of floodplain inundation and water tables would be maintained. No ground disturbing activities would occur within floodplains, meadows or wetlands, very little activity would occur within RR, and there would be no new road construction associated with this project. The action would have no impact on floodplain inundation or water table elevations. **Does not retard or prevent the attainment of ACS Objective 7.**

Alternative 2 (Road Decommissioning): Road decommissioning would slightly reduce the amount of compacted surface within the watershed and may help restore sediment regime and hydrologic function. The roads to be decommissioned are mainly ridgetop with no stream crossing, therefore the impact to floodplain inundation and water table elevation would be negligible. **Does not retard or prevent the attainment of ACS Objective 7.**

Alternative 3 (Density Management): The current condition of floodplain inundation and water tables would be maintained. No ground disturbing activities would occur within floodplains, meadows or wetlands, very little activity would occur within RR, and there would be no new road construction associated with this project. The action would have no impact on floodplain inundation or water table elevations. **Does not retard or prevent the attainment of ACS Objective 7. Does not retard or prevent the attainment of ACS Objective 7.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

Table 2. Documentation of the Coast Creek Road Decommissioning and Density Management Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

ACS Objective 8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

Alternative 1: The current condition of plant communities within riparian areas would be maintained. **Does not retard or prevent the attainment of ACS Objective 8.**

Alternative 2 (Density Management): As recommended in the Deer Creek, Panther Creek, Willamina Creek, and South Yamhill watershed analysis (Bureau of Land Management 1998), no-cut buffers along streams (both perennial and intermittent) will maintain thermal regulation and supply nutrients, LWD, and bank protection. The small amount of thinning within RR would have no impact on species composition and structural diversity of riparian plant communities. **Does not retard or prevent the attainment of ACS Objective 8.**

Alternative 2 (Road Decommissioning): The road decommissioning would not occur within riparian areas, therefore no impacts to species composition and structural diversity of riparian plant communities would occur. **Does not retard or prevent the attainment of ACS Objective 8.**

Alternative 3 (Density Management): As recommended in the Deer Creek, Panther Creek, Willamina Creek, and South Yamhill watershed analysis (Bureau of Land Management 1998), no-cut buffers along streams (both perennial and intermittent) will maintain thermal regulation and supply nutrients, LWD, and bank protection. The small amount of thinning within RR would have almost no impact on species composition and structural diversity of riparian plant communities. **Does not retard or prevent the attainment of ACS Objective 8.**

Alternative 3 (Road Decommissioning): Same as Alternative 2.

ACS Objective 9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.

Alternative 1: The current condition of habitat to support riparian-dependent species would be maintained. **Does not retard or prevent the attainment of ACS Objective 9.**

Alternative 2 (Density Management): No-cut buffers along streams (both perennial and intermittent, and includes the wetlands less than one acre in unit 1) will maintain the habitat for riparian-dependent species. The small amount of thinning within RR would have no impact on habitat for riparian-dependent species. **Does not retard or prevent the attainment of ACS Objective 9.**

Alternative 2 (Road Decommissioning): The road decommissioning would not occur within riparian areas, therefore no impacts to habitat for riparian-dependent species would occur. **Does not retard or prevent the attainment of ACS Objective 9.**

Alternative 3 (Density Management): Same as Alternative 2. **Does not retard or prevent the attainment of ACS Objective 9.**

Alternative 3 (Road Decommissioning): Same as Alternative 2. **Does not retard or prevent the attainment of ACS Objective 9.**

WA = Deer Creek, Panther Creek, Willamina Creek and South Yamhill Watershed Analysis. (BLM, 1998)